

7- contractor v-601 (C-322).

7-a: MIA.

National Board Number: N/A
 Mfr. Representative: _____ Date: _____
 Authorized Inspector _____ Date _____

(A) 648364

FORM U-1 MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
 As Required by the Provisions of the ASME Boiler and Pressure Vessel Code Rules, Section VIII, Division 1

1. Manufactured and certified by Spectrum Process Systems Inc. 285175 Kleysen Way, Rocky View, Alberta. T1X 0K1 Canada
(Name and address of Manufacturer)
 2. Manufactured for Husky Energy. 707-8th Avenue SW. Box 6525, Station "D" Calgary, Alberta T2P 3G7
(Name and address of Purchaser)
 3. Location of installation LSD: 02-20-050-18 W5M
(Name and address)
 4. Type Vertical Glycol Dehy Package 14-05110-31
(Horizontal, vertical, or sphere) (Tank, separator, jkt. vessel, heat exch., etc.) (Manufacturers serial number)
W6436 .21 V-14-05110-31-001 R.3 N/A 2015
(CRN) Drawing number (National Board number) (Year built)
 5. ASME Code, Section VIII, Div. I 2013 Ed.
[Edition and Addenda, if applicable (data)] (Code Case number) [Special service per UG-120(d)]

Items 6-11 incl. to be completed for single wall vessels, jackets of jacketed vessels, shell of heat exchangers, or chamber of multi chamber vessels.
 6. Shell: (a) Number of course(s) 4 (b) Overall length 34'-0"

No.	Course(s)		Material Spec./Grade or Type	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat-Treatment	
	Diameter	Length		Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	30" ID	10'-0"	SA-516-70N	1.25"	.0625"	1	Full	100%	1	Full	100%	N/A	N/A
1	30" ID	8'-0"	SA-516-70N	1.25"	.0625"	1	Full	100%	1	Full	100%	N/A	N/A
1	30" ID	8'-0"	SA-516-70N	1.25"	.0625"	1	Full	100%	1	Full	100%	N/A	N/A
1	30" ID	8'-0"	SA-516-70N	1.25"	.0625"	1	Full	100%	1	Full	100%	N/A	N/A

Body Flanges on Shells														
No.	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Location	Bolting					
									Num & Size	Bolting Material	Washer (OD, ID, ink)	Washer Material		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

7. Heads: (a) SA-516-70N (Material spec. number, grade or type) (H.T. -time and temp.)
 (b) SA-516-70N (Material spec. number, grade or type) (H.T. -time and temp.)

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	Head	1.1875	.0625"	-	-	-	-	2:1	-	-	Concave	-	-	-
(b)	Head	1.1875	.0625"	-	-	-	-	2:1	-	-	Concave	-	-	-

Body Flanges on Heads														
	Location	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Bolting					
									Num & Size	Bolting Material	Washer (OD, ID, thk.)	Washer Material		
(a)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(b)														

8. Type of jacket N/A Jacket closure N/A (Describe as ogee, and weld, bar, etc.)
 If bar, give dimensions N/A If bolted, describe or sketch.

9. MAWP 1415 PSIG N/A at max. temp. 150 F N/A Min. design metal temp. -20 F at 1415 PSIG
(Internal) (External) (Internal) (External)

10. Impact test See Remarks at test temperature of -20 F
(Indicate yes or no and the component(s) impact tested)

11. Hydro., pneu., or comb. test pressure 1840 PSIG Proof test N/A

Items 12 and 13 to be completed for tube sections.

12. Tubesheet N/A N/A N/A N/A N/A N/A
stationary (material spec. no.) [Diameter (subject to press)] (Nominal thickness) (Corr. allow.) [Attachment (welded or bolted)]
N/A N/A N/A N/A N/A N/A
[Floating (material spec. no.)] (Diameter) (Nominal thickness) (Corr.allow) (Attachment)

13. Tubes N/A N/A N/A N/A
(Material spec, no., grade or type) (OD) (Nominal thickness) (Number) [Type (straight or U)]

National Board Number: N/A

Mfr. Representative: _____ Date: _____

Authorized Inspector _____ Date _____

FORM U-1 (Cont'd)

Items 14- 18 incl. to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

14. Shell: (a) No. of course(s) 1 (b) Overall length 40'-0"

Course(s)			Material	Thickness		Long. Joint (Cat. A)			Circum. Joint (Cat. A, B & C)			Heat Treatment	
No.	Diameter	Length	Spec./Grade or Type	Nom.	Corr.	Type	Full, Spot, None	Eff.	Type	Full, Spot, None	Eff.	Temp.	Time
1	1.315" OD	40'-0" Total	SA-106B	.358"	.125"	Seamless	None	100%	SW	None	100%	N/A	N/A

Body Flanges on Shells												
No.	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Location	Bolting			
									Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material
-	-	-	-	-	-	-	-	-	-	-	-	-

15. Heads: (a) N/A (Material spec. number, grade or type) (H.T.- time and temp.) (b) N/A (Material spec. number grade or type) H.T.- time and temp.)

	Location (Top, Bottom, Ends)	Thickness		Radius		Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure		Category A		
		Min.	Corr.	Crown	Knuckle					Convex	Concave	Type	Full, Spot, None	Eff.
(a)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(b)														

Body Flanges on Heads												
	Location	Type	ID	OD	Flange Thk	Min Hub Thk	Material	How Attached	Bolting			
									Num & Size	Bolting Material	Washer (OD, ID, thk)	Washer Material
(a)	-	-	-	-	-	-	-	-	-	-	-	-
(b)												

16. MAWP 1415 PSIG 1415 PSIG at max. temp. 200 F 150 F Min. design metal temp. -20 F at 1415 PSIG
(Internal) External Internal External

17. Impact test See Remarks at test temperature of -20 F
[indicate yes or no and the component(s) impact tested]

18. Hydro., pneu., or comb. test pressure 1840 PSI Proof test None

19. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Type	Material		Nozzle Thickness		Reinforcement Material	Attachment Details		Location Insp. Open.)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Gas Inlet/Gas Outlet	2	6" CL600	RFLWN	*	-	1.375"	.0625"	Integral	UW16.1(c)	-	Shell/Head
LSHH/LC/Insp./LSLL	4	4" CL600	RFLWN	*	-	1"	.0625"	Integral	UW16.1(c)	-	Shell
Gly Inlet	1	2" CL900	RFWN	SA-106B	SA-105N	.344"	.0625"	Integral	UW16.1(c)	Type1	Shell
Coil in/out	2	1" CL900	RFSW	SA-106B	SA-105N	.358"	.0625"	Integral	UW16.1(c)	Type1	Shell
Gly out/ Tray Insp./PI/TI	15	2" CL600	RFWN	SA-333-6	SA-105N	.344"	.0625"	Integral	UW16.1(c)	Type1	Shell
Liq Dump/LG/PSV/spare.	4	2" CL600	RFWN	SA-333-6	SA-105N	.344"	.0625"	Integral	UW16.1(c)	Type1	Shell
Insp./Drain/Equalizer	2	2" CL600	RFWN	SA-333-6	SA-105N	.344"	.0625"	Integral	UW16.1(c)	Type1	Shell
Drain	1	2" CL600	RFWN	SA-333-6	SA-105N	.344"	.0625"	Integral	UW16.1(c)	Type1	Head
X-ray Access	3	2" CL600	RFLWN	*	-	.66"	.0625"	Integral	UW16.1(c)	-	Shell

20. Supports: Skirt Yes Lugs 3 Legs N/A Others N/A Attached Welded to Head
(Yes or no) (Number) (Number) (Describe) (Where and how)

21. Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report (list the name of part, item number, Manufacturer's name, and identifying number):
N/A

22. Remarks Production Impact exempt per UG-20(f)(1-5) & UCS -66(a). Tag # V-601
Volume: 172.58 Cu.ft (4.9 Cu.M). * SA-350LF2CL1
Const. DWG. NO: V-14-05110-31-001 R.3 PSV Installed by other as per UG-125.
4" & 2" Blind Mat. SA-105N Studs: SA-193-B7M & Nuts: SA-194-2HM Thread UNC. Size: (7/8*5 3/4") (5/8*4 1/4").

National Board Number: _____

Mfr. Representative: _____ Date: _____

Authorized Inspector _____ Date _____

A 648364

FORM U-1 (Cont'd)

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1.

U Certificate of Authorization Number 21,356 Expires July 21, 2016

Date January 12, 2015 Name Spectrum Process Systems Inc. Signed Hassan
(Manufacturer) (Representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by ABSA, Alberta of Calgary have inspected the pressure vessel described in this Manufacturer's Data Report on JAN 13 2015, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. By signing this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date JAN 13 2015 Signed Nilanjan Nag Commissions AB 242 NB 12860 A, B
(Authorized Inspector) [National Board (incl. endorsements)]

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the statements in this report are correct and that the field assembly construction of all parts of this vessel conforms with the requirements of ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. U Certificate of Authorization Number _____ Expires _____

Date _____ Name _____ Signed _____
(Assembler) (Representative)

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by _____ of _____, have compared the statements in this Manufacturer's Data Report with the described pressure vessel and state that parts referred to as data items _____, not included in the certificate of shop inspection, have been inspected by me and to the best of my knowledge and belief, the Manufacturer has constructed and assembled this pressure vessel in accordance with the ASME BOILER AND PRESSURE VESSEL CODE, Section VIII, Division 1. The described vessel was inspected and subjected to a hydr-static test of _____. By Rig Ring this certificate neither the Inspector nor his/her employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his/her employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date _____ Signed _____ Commissions _____
(Authorized Inspector) National Board (incl. endorsements)]

7-b: N/P + CRN.

Dehy Package

CERTIFIED BY: SPECTRUM PROCESS SYSTEMS

CALGARY, ALBERTA, CAN.

www.spectrumprocess.ca

M.A.W.P.	1415	P.S.I. AT	150	°F
M.A.E.W.P.	N/A	P.S.I. AT	N/A	°F
M.D.M.T.	-20	°F AT	1415	P.S.I.
SERIAL #	14-05110-31	YEAR BUILT	2016	
CRN	W6436.2	TAG #	V-601	
COIL# M.A.W.P.	1415	P.S.I. AT	200	°F
COIL# M.A.E.W.P.	1415	P.S.I. AT	150	°F
COIL# M.D.M.T.	-20	°F AT	1415	P.S.I.

PROV. REG. 0648364



the pressure equipment safety authority

9410 - 20 Ave N.W.

Edmonton, Alberta, Canada T6N 0A4

Tel: (780) 437-9100 / Fax: (780) 437-7787

January 12, 2015

Attention: Joe Laing
SPECTRUM PROCESS SYSTEMS INC
285175 KLEYSER WAY SE
ROCKYVIEW COUNTY, AB

The design submission, tracking number 2015-00137, originally received on January 12, 2015 was surveyed and accepted for registration as follows:

CRN : W6436.2 **Accepted on:** January 12, 2015
Reg Type: Revision To accepted Design
Drawing No. : V-14-05110-31-001 Rev 3 As Noted

Description	MAWP	Design Temperature	MDMT
Internal Pressure	9756kPa	66 °C	-29 °C
Coil Internal Pressure	9756kPa	93 °C	-29 °C

The registration is conditional on your compliance with the following notes:

Coil revised to 1" sch XXH.

An invoice covering survey and registration fees will be forwarded from our Revenue Accounts.

If you have any question don't hesitate to contact me by phone at (780) 433-0281 or fax (780) 437-7787 or e-mail Chomin@absa.ca.

Sincerely,

CHOMIN, DWIGHT, P. Eng.



505 - 6th Street, Suite 200
New Westminster, BC V3L 0E1

Toll Free: 1-866-566-SAFE

Fax: (778) 396 - 2064

www.safetyauthority.ca

SPECTRUM PROCESS SYSTEMS INC
285175 KLEYSEN WAY
ROCKY VIEW AB T1X 0K1

Date: January 13, 2015
Account #: 15078
Journal #: 60681
Our File #: 5524740

Attn: JOE LAING

Re: Application for Design Registration

The design, as detailed in your, Dwg: V-14-05110-31-001 R.3, for a Pressure Vessel is accepted for registration as follows:

Registered To: SPECTRUM PROCESS SYSTEMS CRN: W6436.21
INC

MDMT: -20 deg F

MAWT: 150 deg F

MAWP: 1415 psig

Drawing #: V-14-05110-31-001

Drawing Revision: 3 (as noted by ABSA)

Conditions Of Registration:

Registration rev'n to 30" ID Glycol Dehy Pkg as per ABSA's registration conditions "Coil revised to 1" shc XXH

This design was registered based on a technical review performed by the province of initial registration in accordance with the Association of Chief Inspectors policy on reciprocal recognition of design review.

Reviewer's Notes:

Ext'l Press: MAWP: 9756kPa, MAWT: 93 Deg C, MDMT: -29 Deg C.

Contact me if you have any questions. The invoice for registration will be forwarded under separate cover.

SHARON PETERS

boiler.designregistration@safetyauthority.ca
Design Administration

cc:

7-C: Travel sheet vessel.

TRAVEL SHEET

A.I. REVIEW <i>L. Bodard</i>		REVIEW DATE: <i>August 14, 2014</i>					
VES. TYPE: DEHY	SERIAL # 14-05110-31	JOB #:		Final Dstn.			
DESCRIPTION	FAB DWG# V-14-05110-31-001 R.0	CRN		TASK COMPLETION DATES AND INSPECTORS INITIALS			
30" ID x34'-0" S/S X 1 1/4" WT	CRN DWG#V-14-05110-31-001 R.0						
ITEM	TAG#: V-601	Q.C.I.	DATE	A.I.	DATE	3RD Party	DATE
1) Calculations in file			Aug 13, 14	<i>AY</i>	<i>JAN 13 2015</i>		
2) Release of approved Constuction Dwgs		<i>RM</i>	Aug 13, 14	<i>LOB</i>	<i>Aug 14/14</i>	<i>AY</i>	<i>B Jan 15</i>
3) Weld /Mat'l Impact Test	Exempt to -20F	<i>RM</i>	<i>b</i>				
4) Heat Numbers recorded on Travel Sheet (backside)		<i>RM</i>	<i>Jan 8/14</i>	<i>BP.</i>	<i>15/1/7</i>	<i>AY</i>	<i>B Jan 15</i>
5) M.T.R.'s checked		<i>RM</i>	<i>b</i>	<i>AY</i>	<i>JAN 13 2015</i>	<i>AY</i>	<i>B Jan 15</i>
6) Weld Procedures Checked		<i>RM</i>	<i>b</i>	<i>LOB</i>	<i>Aug 14/14</i>	<i>AY</i>	<i>B Jan 15</i>
7) Shell and Head Thicknesses Measured				<i>BP.</i>	<i>15/1/7</i>	<i>AY</i>	<i>B Jan 15</i>
8) Nozzles and Fittings Fitted						<i>AY</i>	
9) Nozzle orientation Checked						<i>AY</i>	<i>↓</i>
10) Noz/Flg/TOL/CPLG rating checked							
11) Noz/Flg/TOL/CPLG Mat'l Spec./Grade checked							
Material Inspection							
13.1) Internals-Final or Progress	13) Final Internal Inspection	<i>RM</i>	<i>Oct 21/14</i>	<i>AY</i>	<i>Oct 21/14</i>	<i>AY</i>	<i>B Jan 15</i>
Top Head	14) Shell and Head Fitted			<i>BP.</i>	<i>15/1/7</i>	<i>AY</i>	<i>B Jan 15</i>
Top Sec	15) Weld size checked	<i>b</i>	<i>b</i>			<i>AY</i>	<i>B Jan 15</i>
Mid-Top Sec	16) Welder I.D. & Welder Qualification checked	<i>RM</i>	<i>b</i>			<i>AY</i>	<i>B Jan 15</i>
Mid-Mid Sec	17) ATTACHMENTS					<i>AY</i>	<i>B Jan 15</i>
Mid-Btm Sec	18) Attachments I.D.	<i>b</i>	<i>b</i>			<i>AY</i>	<i>B Jan 15</i>
Btm Sec	19) Radiography	<i>RM</i>	<i>Jan 6/14</i>	<i>AY</i>	<i>JAN 13 2015</i>	<i>AY</i>	<i>B Jan 15</i>
Btm Head	20) Other NDT	<i>RM</i>	<i>b</i>				
	21) Serial # Hard Stamped by NP Brkt.	<i>RM</i>	<i>b</i>			<i>AY</i>	<i>B Jan 15</i>
	22) Full Dia. Break Flgs. Stamped as per UG-11.6(L)					<i>AY</i>	<i>B Jan 15</i>
	23) Btm Head H1# trans. to Straight Flg.	<i>RM</i>	<i>b</i>				
	24) Final External Insp. Prior to PWHT HYDRO	<i>RM</i>	<i>Jan 7/14</i>	<i>BP.</i>	<i>15/1/7</i>	<i>AY</i>	<i>Jan 15</i>
	25) Stress Chart checked						
	26) Final External with the Hydro	<i>RM</i>	<i>b</i>	<i>BP.</i>	<i>15/1/8</i>	<i>AY</i>	<i>B Jan 15</i>
	27) HYDROTESTING/ VESSEL Water temp. min. 40°F	12686 kPa 1840 psi Ga# <i>F42/19</i>	<i>Jan 8/15</i>	<i>BP.</i>	<i>15/1/8</i>	<i>AY</i>	<i>B Jan 15</i>
	Coil hydro	12686 kPa 1840 psi Ga# <i>F73/15</i>	<i>Oct 6/14</i>	<i>AY</i>	<i>Oct 6/14</i>	<i>AY</i>	<i>B Jan 15</i>
	28) Nameplate Stamped		<i>b</i>	<i>AY</i>	<i>JAN 13 2015</i>	<i>AY</i>	<i>B Jan 15</i>
	29) Jurisdiction Accepted CRN drawing		<i>b</i>	<i>AY</i>	<i>JAN 13 2015</i>	<i>AY</i>	<i>B Jan 15</i>
	30) Manuf. Data Report		<i>b</i>	<i>AY</i>	<i>JAN 13 2015</i>	<i>AY</i>	<i>B Jan 15</i>
	31) Partial Data Reports						
	32) Nameplate Installed						
	33) NCR Cleared						

L2 → L4 internal
except N3 → 0/5
RM
SEP 24/14
L1 long seam only
RM
jus Sep. 24/14
L3 internal
SEP 30/14
RM
jus Sep. 30/14
N12 and Down internal
RM
oct 1/14
jus Oct. 1/14
BOT section internal
OK
oct 3/14
RM
jus Oct. 3/14

* DENOTES AN A.I. INSPECTION POINT
 ** DENOTES AN A.I. HOLD POINT
 AUTHORIZED INSPECTOR SHALL BE GIVEN TRAVEL SHEET PRIOR TO CONSTRUCTION SO THAT HE CAN DESIGNATE INSP. AND HOLD POINTS

ST thickness required on ground flush long seams. BP. 15/1/7.

RM
Jan 7/15

Vessel Travel Sheet

DESCRIPTION	ITEM	LOC	THICK. SHELL&HEAD				MATERIAL SPEC	HEAT NUMBER	WELD SYMBOLS CATEGORY			HEAT #S	TOLS	CPLGS	TYPE 1 JOINT
			DIAMETER	NOM	MEAS HDS MIN	DWG HDS MIN			LOC.	A	B				
SHELL#1			30"	1.25"	1.26		SA-516-70N	746413 AK54BD	A/2	✓					
SHELL#2			30"	1.25"	1.26		SA-516-70N	390314-9694002	A/2	✓		.5"			
SHELL#3			30"	1.25"	1.27		SA-516-70N	387344 8202403	A/2	✓		.75"			
SHELL#4			30"	1.25"	1.29		SA-516-70N	387344 8202403	A/W	✓	03	1"			
SHELL#5												1.5"			
SHELL#6												1.75"			
HEAD #1			30"	1.25"	1.31	1.1875"	SA-516-70N	78499 023	C1	✓	C2	2"			
HEAD #2			30"	1.25"	1.29	1.1875"	SA-516-70N	371075 6218501	C2	✓	C2				MISC HEAT #S
BOOT SHELL #1									C3		C2				MISC HEAT #S
BOOT HEAD #1									C4		C2				
MANWAY NECK									C5		C2				
BRK. FLG. (TOP)															POISON PADS
BRK. FLG. (BTM)															
															SADDLE WEAR PADS
															SKIRT 82495 015

NOZ #	DIA	W.T.	PIPE COD E	MATERIAL SPEC	HEAT #	B	C	D	FIT UP	FLANGE/FITTING HT #	FILLET WELD SIZES			INT. PROJ H	WPS #
											W41	W42	W43		
N1	6"		LWN	SA-350LF2CL1				C	✓	17277	3/8"	-	BW	SF	6
N2	6"		LWN	SA-350LF2CL1				A	✓	17277	3/8"	-	BW	SF	6
N3	2"	341	C	SA-105N/106B	574906 ✓		E3	J	✓	79838	3/8"	-	BW	AS	6
N4	2"	376	C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N5	2"		C	SA-105N/106B	720770 ✓	Y	Y	A	✓	1339087/826	3/8"	-	BW	SF	6
N6	2"		C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N7	2"		C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N8	4"		LWN	SA-350LF2CL1	C900 BN ✓			C	✓	5026231	3/8"	-	BW	3/8"	6
N9	4"		LWN	SA-350LF2CL1	C900 BN ✓			C	✓	5026231	3/8"	-	BW	3/8"	6
N10	2"	337	C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N11A	2"		C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N11B	2"		C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N12	2"		C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N13A	2"	364	C	SA-105N/106B	01289 ✓			C	✓	4713476	3/8"	-	BW	SF	6
N13B	2"	363	C	SA-105N/106B	" ✓			C	✓	4723476	3/8"	-	BW	SF	6
N14A-I	2"	339	C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N14M	2"		C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N15	2"		C	SA-105N/106B	720770 ✓	Y		C	✓	1339087	3/8"	-	BW	SF	6
N16	4"		LWN	SA-350LF2CL1	C900 BN ✓			C	✓	5026231	3/8"	-	BW	3/8"	6
N17	4"		LWN	SA-350LF2CL1	C900 BN ✓			C	✓	5018987	3/8"	-	BW	3/8"	6
N18	2"		LWN	SA-350LF2CL1	C996 BN ✓			C	✓	5028568	3/8"	-	BW	SF	6
N19	2"		LWN	SA-350LF2CL1	" ✓			C	✓	5028568	3/8"	-	BW	SF	6
N20	2"		LWN	SA-350LF2CL1	" ✓			Y	✓	5028568	3/8"	-	BW	SF	6

REPAD #	Req. WT	Act. WT	O.D.	MATL SPEC	HEAT NUMBER	FIT UP	SERIAL #: 14-05110-31

1A - i
 B - j
 C - i
 D - R2
 E - 9
 F - F2
 G - R2
 H - R2
 I - i
 J - i
 K - i
 L - P3

7-d: Hydro vessel.

HYDROSTATIC/PNEUMATIC TEST REPORT

TEST CONDUCTED BY: SPECTRUM PROCESS SYSTEMS INC.

JOB NUMBER: 14-05110-31 SKID OR UNIT #: _____

CUSTOMER: Husky

QUALITY CONTROL: M. Harris

THIRD PARTY INSPECTOR: _____

HOLDING TIME AT TEST PRESSURE: 30 MIN. MINIMUM. WATER TEMPERATURE: 40°F MIN.

RESULTS/COMMENTS: Accepted

LINE DISC./VESS. S.N./ETC.	TEST PRESSURE	GAUGE #	DATE OF TEST	WITNESSED BY
V-601 14-05110-31 vessel	1840 PSI	F42/F19	Jan 8/15	<i>[Signature]</i>
V-601 vessel coil	1840	F73/F75	6d6/14	<i>[Signature]</i>